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ABSTRACT

A manpower survey of 426 Indiana libraries emphasizes the need for additional library supportive personnel. Recommendations to help provide the needed personnel include: (1) a continuing two-year associate degree program be developed and offered in Indiana to prepare library technical assistants; (2) lead instructors should be professional librarians; (3) courses should be regular college offerings so credits earned are applicable for transfer and/or academic progression; (4) individual short and night courses, work-shops and seminars, should be offered locally wherever sufficient interest warrants; (5) vocational training programs be designed for library clerks or aides; (6) an active placement service be established in conjunction with every program; (7) training programs for auxiliaries be based upon national objectives and standards that are developed by the library profession; (8) the American Library Association should establish broad national standards for the certification (or registration) of library technical assistants and (9) Indiana should then develop State standards and procedures (consistent with these national standards) in order to facilitate both intra- and inter-State communications, administration, reciprocity agreements and the like. (MF)

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THE CASE
for
LIBRARY TECHNICAL ASSISTANTS
and
LIBRARY CLERKS
in
Indiana

School of Technology

LT002 056

MANPOWER REPORT 69—3

18 SEPTEMBER 1969

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MANPOWER REPORT 69-3

The Case for Library Technical Assistants and Library Clerks in Indiana

The purposes of this study are to:

(1) Identify the present and projected needs for these library auxiliaries (i.e. supportive or non-professional personnel) school, public, college/university, and special libraries in Indiana.
(2) Ascertain the approximate monthly salaries of auxiliaries.
(3) Determine the consensus of practicing librarians' opinion concerning certification of Library Technical Assistants.
(4) Obtain the suggested depth of knowledge in selected library subject areas needed by auxiliaries.
(5) Present views of practicing librarians concerning auxiliaries and their training, and
(6) Formulate related conclusions and recommendations.

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Acknowledgement is also gratefully made to Miss Ann Kerker, as President of the Indiana Chapter of the Special Libraries Association; Mr. Harold J. Sander, President of the Indiana Library Association; Mrs. Ann Landreth, Retired, Certification & Placement Officer, Indiana State Library; and to Mr. Herbert M. O'Neill, research assistant.

Note: Copies of this report and those listed on pages 52, 53, and 54, are available for $1.50. (Indiana Government and educational offices exempted.) Please send order and check made payable to Purdue University to Prof. J. P. Lisack, Director, Office of Manpower Studies, SCC-A, Lafayette, Indiana 47907.

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Chapter I

Purpose and Description of the Report

1. The Problem. -- "Yes, there is a library manpower shortage and there is a way of solving it... We must restructure the profession to provide a career ladder and t, attract personable people who like people and books...

> "Libraries need personnel and they need them now... We must stop competing with each other and coordinate our resources to provide quality service... Quality of staff is an important factor in service and these 1 and 2 year "technician" programs can help us obtain the needed trained staff."

The above recent quote from an experienced librarian[1/] pretty well states the problem - and suggests a solution as well.

The problem - and the suggested solution - are not new. A few junior college training programs for library clerks and subprofessional workers were offered in the late 1940's and early 1950's. In the early 1960's, more programs were initiated independently (under a variety of names) in response to local needs, quite unaware of each other, without standards, and usually without much guidance from the profession until about 1965 when these efforts began to be recognized and questioned.[2/] The attitude of the library profession toward these junior college programs by 1965 is reflected in the initial reaction of the Executive Board of American Library Association's Library Education Division - which discouraged the establishment of additional programs. The Board acknowledged the need for technicians and the existence of some programs "but did not have evidence that they had been successful."[2/]

The Board's decision was based on the following:

> "(1) The demands on subject and language knowledge are such that for most positions a college education is essential. (2) Junior college training courses could not be credited toward other undergraduate or graduate training. The result would be that competent persons who become interested in the profession after successful experience at the technical level would find it difficult to continue toward professional degrees. ALA recommendations for undergraduate work are for courses leading to graduate courses fully articulated

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[1/] Refers to reference number in Selected Bibliography, Appendix I, on page 33.

with them. (See 1959 ALA Standards for Undergraduate Library Science Programs. ALA Bulletin 52:695-700 (1958). (3) Library clerks or aides who carry on the most routine tasks are best trained on the job or through a short-term course. (4) Many library routines vary so much from library-to-library that general courses would have limited usefulness. Employees at this level are students who, if they continue to work in libraries, will eventually obtain graduate degrees in librarianship."[3]

The variety of these junior college programs' objectives, standards, and titles, and doubt of their appropriateness is fully understandable. They were largely developed to meet local needs and the library profession had provided neither the necessary criteria or guidance for the control of these developing programs. The same situation concerning the need for professionals' cognizance of the occupational titles, duties and responsibilities, qualifications and training of supportive personnel exists in other fields as well as librarianship.[4]

The picture changed beginning in 1966 when the ALA and others took positive actions related to the identification and training of supportive library staffs.[5] Among the most important of these actions that pertain to this study is the adoption of the report of the Joint Ad Hoc Committee of Library Administration Division (LAD) and Library Education Division (LED) on Subprofessional or Technician Class of Library Employees.[6] This report, which is now the official position of LAD and LED proposes two levels of subprofessional employees, namely the library clerk and the library technical assistant and defines the tasks performed by these two categories of library workers. Greater use of the technical assistant level is urged. The final recommendation reads as follows:

"In terms of modern management practice and for maximum use of professionally qualified librarians some pre-employment training of staff below professional level is desirable. The in-service training in individual libraries of this work force estimated at requiring over 145,000 additional personnel in the next ten years is neither economical nor feasible except by large libraries or library systems. Furthermore, with mobility of population, a standardized preparation of supporting staff would enhance employment prospects of the individual and aid the employing agency. Screening of prospective applicants and orientation in library goals and methodology of such a middle-level library staff is practical through vocational and junior college training programs. Projects of this nature may obtain financial assistance under federal government legislation.

"It is recommended that the Library Education Division and Library Administration Division recognize the value of training for Library Clerks and Library Technical Assistants and develop curricula and standards for such training to strengthen existing and planned programs."[7]

The occupation of the library technician has received formal recognition by the U. S. Department of Labor. In a recent reprint from the Occupational Outlook Quarterly, a separate section was devoted to the "Library Technician."[8/] The article pointed out that this occupation had only recently been defined clearly and that many libraries were freeing their professional staffs from some of their simpler tasks by using library technicians. It stated most technicians presently employed were trained through on-the-job training programs lasting one to three years -- but many new hires were trained in two year junior or community colleges, and formal training "may become an entry requirement." Program shortcomings identified in the Occupational Outlook included the fact that the curriculum in a particular college is often tailored to meet local needs and may not qualify students for jobs in libraries outside the immediate area; also, that students who look forward to becoming professional librarians should be advised that credits earned in a 2-year college program in library technology are not necessarily applicable toward a professional degree in library science.

2. Rationale and Methodology Applied in this Study. -- If there is to be order and full acceptance of supportive personnel within a profession, it is mandatory for that profession to guide and control the related activities. This includes provision of occupational titles, duties and responsibilities, and qualifications of such personnel: it includes philosophy, objectives, and standards for curricula and for training program accreditation. Also, standards for certification and/or registration of graduates and other matters must be developed. In line with such rationale, it was decided in this study to use the official position of the AIA concerning the two levels of subprofessional employees; the library technical assistant and the library clerk ("aide" was included with the latter title). See Appendix II for a description of the work, abilities, duties and responsibilities of library supportive staff personnel.

The library advisory committee members assisting the author agreed that there was value in reaching every library in the State to present the problems of defining, recruitment and training of supportive personnel. It was decided to send all School, Public, College/Universities, and Special Libraries a letter of explanation with a questionnaire. The letter was signed jointly by Miss Ann Kerker, President of the Special Libraries Association, Indiana Chapter, and

Mr. Harold J. Sander, President of the Indiana Library Association. The questionnaire was a one page instrument designed to:

(1) Ascertain the current number of supportive personnel now employed, needed now and in the future, and their approximate monthly salaries;

(2) Determine whether librarians believed Library Technical Assistants should be certified;

(3) Obtain opinions as to level of training expected for the Library Technical Assistant and the Library Clerk in selected library-related subjects; and

(4) Solicit comments or suggestions.

See Appendix III for copy of letter and questionnaire used.

It was also decided that it would be valuable to analyze questionnaire responses for each supportive occupation in two ways: (1) by type of library and (2) by geographic location within the state.

3. Contents and Format of this Report. -- This first chapter presents the basic problems concerning library supportive personnel and their training, the rationale and methodology applied in this study and explains the format of this report. Chapter Two describes the questionnaire used in detail and presents the resulting data in a series of tables; the highlights and significant implications are pointed out: this chapter also deals with general employment outlook, salary information, level of training desired for supportive personnel and a discussion of the certification of Library Technical Assistants. The discussion (including curricula matters), conclusions and recommendations are offered in Chapter Three: canary-colored pages are used in this chapter for the reader's convenience.

A selected bibliography, sample copy of the questionnaire used, appendices and a variety of statistical tables are included at the end of this report.

Chapter II

Questionnaire Distribution, Response and Analysis

4. Description of the Survey. -- The letter of transmittal was prepared on stationery having a duplicate letterhead: The Indiana Library Association and the Special Libraries Association, Indiana Chapter. It was signed by presidents of both associations, namely Mr. Harold J. Sander and Miss Ann Kerker respectively. The letter described briefly the two levels of library supportive personnel, mentioned the problems of their recruitment and training, and asked the librarians to cooperate by completing and returning the questionnaire.

The questionnaire was a simple, one page instrument having five parts:

(1) Identification of the name and address of the respondent and the type of library (viz. School, Public, College/University, or Special -- i.e. industry or hospital).

(2) Personnel information, to include number of technical assistants and clerks or aides now employed, additional staff needed now, estimated needs in the next five years, and the approximate monthly salaries that might be offered to graduates of related training programs.

(3) A question asking if Library Technical Assistants should be certified.

(4) A table of library subjects - and a request for the respondent to indicate the level of training she expected in each subject. And finally,

(5) A place to enter comments or suggestions.

Note: A sample copy of the letter and questionnaire are attached as Appendix III.

5. Distribution and Response. -- A total of 1,275 surveys were mailed to individual librarians.* Self-addressed, stamped return envelopes were included.** There were 426 useable returns, a response of more than one-third. The returns were sorted by type of library and arranged into the six geographic Purdue University Extension Administration Regions. (See Appendix IV for map.) There were 255 returns from School Libraries, nearly 100 from Public, 41 from College/University and 31 from Special Libraries: the representation from each type of library is considered to be adequate for statistical analysis. The distribution of respondents by type of library and for each region are shown in Table 1 on the next page.

Note: *Names and addresses were kindly provided by Mrs. Ann Landreth, Certification & Placement Officer, Library Certification Board, Indiana State Library, Indianapolis.

**The Indiana Library Certification Board contributed $100.00 and the Indiana Chapter of the Special Libraries Association contributed $40.00 to help defray the costs of stamps and stationery: this is much appreciated.

Table 1

Response by Region and Type of Library

Region: \ Type of Library	School	Public	Col./Univ.	Special	Total	% Total
1	17	6	1	5	29	6.8%
2	30	12	7	-	49	11.5%
3	45	18	4	8	75	17.6%
4	30	19	8	1	58	13.6%
5	76	24	12	13	125	29.3%
6	57	20	9	4	90	21.2%
Total	255	99	41	31	426	-
% Total	59.9%	23.2%	9.6%	7.3%	-	100.0%

Regions 1 and 2 can be combined for general planning purposes as Region 1 is comprised of only one county (Lake) which is contiguous with Region 2.

Due to the adequate questionnaire returns and representation from each type library, no attempt in this study has been made to inflate data to include non-respondents or those not surveyed. Requirements therefore must be interpreted as the lower parameter or minimum needs.

6. Summary of Employment and Projected Requirements. -- As stated earlier, the two supportive occupations were Library Technical Assistant (the two-year college associate degree graduate equivalent) and the Library Clerk or Aide (with equivalent of about six months of vocational type training). The respondents indicated they employed nearly 200 Library Technical Assistants and needed nearly 250 more now and 550 in the next five years. If one planned to fill these needs by training out approximately one-fifth of the current need plus one-fifth of the five year projected need each year, an average of nearly 160 Library Technical Assistants should be graduated annually. Likewise, respondents indicated they now employed more than 550 Library Clerks or Aides and needed about 320 more now, and 765 in the next five years. The average annual recurring requirement is nearly 220 Library Clerks or Aides. See Table 2 for total State employment and projected requirements on the next page.

Table 2

Summary of Employment and Projected Requirements

Total State

Library Auxiliary:	Number You Now Have	Additional Number You Need Now	Number You Estimate You Will Need In Next Five Years	Average Annual Recurring Requirement *
Library Technical Asst.	195	246	547	159
Library Clerk or Aide	551	319	765	217

*$\frac{\text{Additional Number Needed Now + Number Needed Next 5 Years}}{5}$ = Aver. Annual Requirement

Program planning should be based on average minimum annual recurring requirements: to plan for meeting all current needs during one or two years may preclude optimum effectiveness in utilizing facilities and resources.

The next four tables show how many library technical assistants and library clerks or aides are employed and are needed in the future -- arranged by type library and by region.

Table 3

Library Technical Assistants by Type of Library

Type of Library	Number You Now Have	Additional Number You Need Now	Number You Estimate You Will Need In Next Five Years	Average Annual Recurring Requirement *
School	35	143	240	78
Public	76	57	154	42
College/University	64	32	120	30
Special	20	9	33	9
Total	195	246	547	159

It is noteworthy that School libraries now have comparatively few technicians employed -- but report the highest proportional needs. Nearly half of the total State average annual recurring requirement is needed in School libraries. There are many more technicians needed than are now employed... (see Table 3) which is understandable considering that no formal library technician program exists in Indiana. Saying it another way, if current needs could be met, the number of technicians employed would be more than doubled.

*$\frac{\text{Additional Number Needed Now + Number Needed Next 5 Years}}{5}$ = Aver. Annual Requirement

In examining the distribution of library clerks or aides by type library, it is noteworthy that again the School libraries have reported the greatest proportional needs. Again, about half the total State need is in School libraries. Opposite to the preceding findings for technicians, there are many more library clerks now employed than there are job vacancies... (see Table 4) which is understandable considering they are largely trained on-the-job and have lower levels of duties and responsibilities.

Table 4

Library Clerks or Aides by Type of Library

Type of Library	Number You Now Have	Additional Number You Need Now	Number You Estimate You Will Need In Next Five Years	Average Annual Recurring * Requirement
School	171	191	332	105
Public	211	54	222	55
College/University	137	63	165	46
Special	32	11	46	11
Total	551	319	765	217

*$\frac{\text{Additional Number Needed Now} + \text{Number Needed Next 5 Years}}{5}$ = Aver. Annual Requirement

The next two charts show the distribution of library technical assistants and clerks or aides for six regions within Indiana. (See Appendix IV for map.)

Table 5

Library Technical Assistants by Region

Regions	Number You Now Have	Additional Number You Need Now	Number You Estimate You Will Need In Next Five Years	Average Annual Recurring Requirement
1 Calumet	23	13	33	9
2 North Central	51	32	64	19
3 North Eastern	21	37	80	24
4 Lafayette	19	23	63	17
5 Central	61	66	191	52
6 Southern	20	75	116	38
Total	195	246	547	159

The largest number of library technical assistants now employed - and needed in the future was for the Central (Indianapolis) Region. The Southern Region was next: Regions I and II were third highest (they can be combined as Region I is made up of only one county (Lake) and is contiguous to Region II): Region III (Fort Wayne Area) was fourth highest in requirements. (See Table 5.)

Table 6

Library Clerks or Aides by Region

Regions	Number You Now Have	Additional Number You Need Now	Number You Estimate You Will Need In Next Five Years	Average Annual Recurring Requirement
1 Calumet	66	13	64	15
2 North Central	117	87	102	38
3 North Eastern	68	46	123	34
4 Lafayette	72	36	83	24
5 Central	162	71	250	64
6 Southern	66	66	143	42
Total	551	319	765	217

The largest number of library clerks now employed - and needed in the future was also for the Central (Indianapolis) Region, followed by the combination of Regions I and II, then the Southern and North Eastern (Fort Wayne) regions. (See Table 6.)

7. Average Numbers of Library Supportive Personnel, per Library, by Type Library. -- It is often valuable for planning purposes, to ascertain the average number of people in a given occupation that are normally found in each establishment and to develop some meaningful ratios. In this study, the average number per library of jobs (filled and unfilled) for library technical assistants and library clerks have been determined by type library.

These are shown in Table 7:

Table 7

Average Number of Supportive Type Jobs, per Library

Type of Library	Library Technical Assistants	Library Clerks or Aides
School	.72	1.42
Public	1.34	2.69
College/University	2.34	4.88
Special	.94	1.39
Total	1.04	2.04

Table 7 indicates that as an overall average, there were one library technical assistant and two library clerks or aides types of jobs (both filled and vacant) in every library responding to the survey. However, the distribution varied significantly by type of library: for example, there is an average of only .72 technician level jobs in each School library (can be read 72 technician jobs for each 100 School libraries), whereas there are 2.34 such jobs for each College/University type library. The ratio of one technician to every two clerks was generally consistent for all types of libraries. See Appendix V for more detailed interpretations and calculations.

8. Employment Outlook - National. -- The preceding manpower requirements for library technical assistants and clerks was derived from the questionnaire mailed to libraries in Indiana. The U.S. Department of Labor has recently published[3/] library technical assistant job information as follows:

> "Library technicians now number about 70,000 compared with 105,000 professional librarians. Seven out of 10 technicians are women, but the proportior of men has been increasing in recent years.
>
> "The employment outlook is excellent through the 1970's for library technicians in this rapidly growing field. Graduates of 2-year academic programs will be in particularly strong demand. Growth will be accelerated by the increasing needs of a growing population for library services and the continued shortage of professional librarians. Another growth factor is recent Federal legislation - the Higher Education Facilities Act, the Elementary and Secondary Education Act, and the Library Services and Construction Act - that authorizes Federal funds for the construction, expansion, and improvement of libraries. Under this legislation, at least 715 new public and academic libraries were built in 1966, and $78 million was spent on additional materials for school libraries.
>
> "About 5,500 technicians* will be needed annually between 1967 and 1975 to provide for both growth and the need to replace workers who die, retire, transfer to another occupation, or leave the field for other reasons."[8/]

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*Special Note on Validation of State Requirements for Library Technicians..

Inasmuch as libraries are directly related to population, knowing the national requirements for technicians provides the base for computing a general estimate of needs for any given state. The percent of the total national population that resides in any given state is determined and this percentage is then applied against the total technician needs. There are about 5,500 library technicians needed annually in the nation for growth and attrition[8/]; Indiana has approximately 2.5 percent of the total national population; thus it can be calculated that Indiana needs approximately 118 technicians per year for growth and attrition. In Table 3, it was shown that 547 technicians were reported by survey respondents as needed in the next five years -- an average of about 110 per year. These close parallel requirements from different sources tend to validate each other.

9. Salary Information, Indiana. -- Each library in Indiana was asked to indicate the approximate monthly salary that would be offered to new graduates (of library technical assistants - two-year college-level programs, and library clerks or aides - six months vocational programs). The average monthly salary reported for the library technical assistant was $426* (median $420) with a standard deviation of $95, and the average salary reported for the library clerk or aide was $320 (median $310) with standard deviation of $75. The difference between these salaries is $106, which is consistent with the differences between the levels of training and responsibilities of these two types of library personnel. See Table 8 for monthly salary distributions. (The average salaries as reported by types of libraries - by region, are shown in Appendix VI.)

Further analysis of the respective monthly salary distributions of these library auxiliaries disclosed that the distribution of offered salaries for the Library Technical Assistant is a skewed distribution to the right (k = -.42). This can be interpreted as indicating that the highest salary which the employer forsees he can economically afford is being offered. However, in the case of the Library Clerk or Aide, the employer is apparently reluctant to offer the "top dollar" - this is indicated by a skewed distribution to the left (k = .45). See Table 8.

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*Note: The average monthly salary of $426 reported for library technical assistants is well below the salaries of other two-year technology program graduates. The Purdue University Placement Service reported[9] that the average accepted salaries of applied technology (two-year curricula graduates) for June 1968 was $609.

Table 8. Distribution of Monthly Salaries Offered for Each Library Auxiliary by Respondents. (Total State)

Library Auxiliary:	Monthly Salary Distributions										Statistics	
	≤ $199	$200 to $249	$250 to $299	$300 to $349	$350 to $399	$400 to $449	$450 to $499	$500 to $549	$550 to $599	≥ $600	$\bar{x}$*	S.D.**
Library Technical Asst.	4	2	10	17	18	27	35	10	7	2	$426	$95
Library Clerk or Aide	11	10	22	44	37	28	12	2	0	1	$320	$75

*arithmatical average

**standard deviation - a measure of the variability of the individual observations in the data from the arithmetical average. (The arithmetical average, plus or minus three S.D., includes 99% of the individual observations in the data.)

Interesting relationships were found to exist when the salary information was further broken down and analyzed according to type of library. Among the findings are the following salient relations:

First, in terms of rank order of types of library by average monthly salaries offered, it was found that Special libraries offered the highest monthly salaries for both the Library Technical Assistant ($487) and Library Clerk or Aide ($411) over all other types of libraries; however, Public libraries offered the lowest monthly salaries for both the Library Technical Assistant ($377) and Library Clerk or Aide ($291). It is recognized that many of these Public libraries have few employees and are located in small cities and towns.

Second, in terms of rank order of types of library by standard deviations of the average monthly salaries offered, it was found that Colleges and Universities recorded the lowest variation from their average for both the Library Technical Assistant ($65) and Library Clerk or Aide ($56). Thus it can be inferred that the College and University libraries are more agreed (standardized) in their salary offerings than are the other types of libraries. See Table 9.

Table 9

Rank Order of Average Monthly Salaries Offered by Type of Library

	Library Technical Assistant			Library Clerk or Aide		
Rank	Type of Library	Average	Std. Dev.*	Type of Library	Average	Std. Dev.*
1	Special	$487	$75	Special	$411	$88
2	School	$447	$98	College/University	$328	$56
3	College/University	$429	$65	School	$319	$71
4	Public	$377	$91	Public	$291	$67
	Average	$426	$95	Average	$320	$75

*See Table 8.

Analysis of the average monthly salaries offered by regions disclosed that Regions I, III, V, and VI offered monthly salaries greater than the over-all state averages. Regions II and IV, on the average, offered less than the over-all state average for both supportive occupations. See Table 10.

Table 10

Average Monthly Salaries Offered by Regions for All Types of Libraries

	Average Monthly Salaries Offered by Regions						
Library Axuiliary:	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total Aver.
n =	10	14	22	16	45	24	131
Library Technical Asst.	$463	$386	$436	$407	$428	$432	$426
n =	13	23	20	22	53	25	156
Library Clerk or Aide	$362	$271	$329	$295	$329	$314	$320

Note: See Appendix VI for Average Salaries as Reported by Types of Libraries by Region.

10. Salary Information, National. -- The preceding information concerned salaries in Indiana. The U.S. Department of Labor has recently published[8/] salary information for library technical assistants as follows:

> "Large libraries in metropolitan areas typically pay technicians from about $5,200 to $8,500 a year ($433 to $710 a month); in small towns and small libraries, salaries range from about $3,800 to $5,500 ($316 to $458 a month).
>
> "Annual salaries in the Federal Government generally ranged from about $5,100 to $7,000 in mid-1968 ($425 to $483 per month)."

Note: The average monthly salary of $426 reported in Indiana for new library technician graduates is consistent with the lower (beginning) salaries as presented above.

> "Library technicians employed in public and private school systems usually work only during school hours. The work schedule in public and college libraries may include some weekend and evening hours. In the Federal Government and other special libraries, a standard 40-hour week is common.
>
> "Most libraries provide "fringe" benefits in the form of group life, health, and accident insurance and retirement pay. Additional benefits offered by private business often include educational assistance programs. Library technicians employed by the Federal Government receive the same employee benefits as other Federal workers."[8/]

11. Certification of Technicians. -- For some years now, the technician (e.g. two-year associate degree graduate) has been achieving increasing stature. There is a national trend to examine and to certify (or register and/or license) more technicians and to accredit more two-year associate degree programs. Professionals in many fields are taking more active roles in the identification of titles, definition of duties and responsibilities, development of training standards, and the examination and establishment of certification or other controlling mechanisms relating to supportive personnel entering and working in their fields or areas. Wherever this was done, closer and more effective working relations have resulted, and there has been an upgrading of personnel and better assurance of their qualifications, and progress in meeting current and changing requirements. Some common cases in point include airplane and powerplant mechanics, registered nurses and licensed practical nurses. Examples of registration and certification of

technicians include; The American Registry of Radiologic Technologists,[10] and the Institute for the Certification of Engineering Technicians:[11] these groups have formed societies for qualified members, viz. The American Society of Radiologic Technologists[12] and The American Society for Certified Engineering Technicians[13].

In view of the similarities at the technician level in occupational qualifications and problems of training and control, the questionnaire sent to Indiana libraries asked the question, "Do you believe the Library Technical Assistant should be certified?". As stated earlier, there were 426 responses to the survey; of these, 383 answered the question on certification directly, 325 answering Yes and 58 answering No (85% favorable). See Table 11.

Table 11

Do You Believe Library Technical Assistants Should Be Certified?

Response by Type of Library

Type of Library:	YES	NO	% YES
School	214	21	91.1
Public	69	20	77.5
College/University	23	10	70.0
Special	19	7	73.1
Total	325	58	84.9
	n = 383		

The relatively lower rating (but still a clear majority in favor of certification) of College/University libraries is believed to reflect the fact that many students near or at the baccalaureate level (and/or their wives) are now employed as technicians (a large number working part time). To "certify" these personnel, many of them transients, may present some problems.

Note: Use of statistical techniques relevant to sample size determination revealed that the return was well over the minimum number required for a limit of error ± 5% and a sample probability error of 1%. Expansion to the universe indicates that of the 1275 libraries surveyed, the probability is 95% that the true number who believe that the Library Technical Assistant should be certified falls somewhere between 1043 and 1124.

An analysis of returns was also made by region: the variation of opinion of any one region to the over-all response was less than 5%, indicating a close consensus exists in favor of the certification of library technical assistants throughout the State.

12. Level of Training Desired for Library Supportive Personnel. -- In order to assist faculty members in planning courses for training programs, each respondent was asked to identify the level of training expected in selected subjects in training library technical assistants and library clerks.* The question was asked: "In formal training programs, what level would you expect in each subject? Please enter a 1 for Knowledge of terminology, familiar with procedures and forms, 2 Ability to accomplish assigned tasks and routine library duties, or 3 Ability to solve problems and advise others in this subject area." Seven specific subjects were listed with a place to write in others. See Table 12 for results.

Table 12

Average Desired Training Level

Subjects	Library Technical Assistant	Library Clerk or Aide
Audio-Visual Services including Graphics, T.V., & Equipment	Average 2.4	Average 1.5
Bibliographic Tools	2.4	1.5
Cataloging Procedures	2.2	1.5
Circulation Procedures	2.5	2.0
Library Service to Users	2.4	1.8
Ordering Procedures	2.2	1.6
Periodicals Procedures	2.3	1.7
Other (Please Identify)	2.5	2.0
	n = 302	n = 312

*Note: It is recognized that most of these responses are based on traditional library services experiences; curricula planning must also consider the advancing library science, communications technology, media, new standards, etc.

A review of Table 12 indicates that more than 300 respondents were essentially agreed that the highest levels of training for every subject, were expected of the technician over the clerk. In general, it was expected technicians would work on occasions above the level of performing routine tasks and would have the ability to solve some problems and advise others in certain cases: clerks were largely expected to accomplish assigned tasks and routine duties. "Circulation procedures" and "library service to users" scored highest for both types of supportive personnel. Technicians were also expected to have training at a higher level in the subjects of "Audio-visual Services Including Graphics, T.V. and Equipment," "Bibliographic Tools," and "Library Service to Users."

There was fairly close agreement of the desired level of training among respondents of the various types of libraries. In the technician group, all types of libraries ranked "Circulation Procedures" the highest: School libraries showed a tendency to rank "Audio-visual Services" higher than did other libraries; Public libraries rated "Library Service to Users" slightly higher; College/Universities ranked "Periodicals and Procedures" higher and Special libraries ranked "Bibliographic Tools" higher.* In the library clerk group, there was also fairly close agreement among types of libraries as to desired level of training; generally, School libraries expected a little more of these clerks than did other types of libraries. An analysis of questionnaire returns by region disclosed a reasonable order of agreement among regions.*

In attempting to learn the desired average training level of library supportive personnel, the respondent was given an opportunity to write in and rate any additional subject. In general, secretarial duties such as typing, filing, and general office procedures ranked first among the fill-ins (13 such comments were received) for both the library technical assistant and the library clerk or aide. Public relations ranked second for both these auxiliaries (5 comments) while book mending (2 comments) and book binding (2 comments) ranked third.

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*Note: The detailed returns are available upon request to the author.

There were also specific subject areas relevant to a particular type of library such as: (1) training in bulletin boards and supplies, and conducting study halls - by the School library respondents, (2) training and knowledge concerning the use of the "Bookmobile" - by Public library respondents, and (3) training in basic computer and unit record operations - by the Special library respondents.

A more detailed summary of the fill-ins to the "Other (Please Identify)" subject column are presented in Appendix VII; this detailed information is presented by type of library and by subject area.

13. Comments and Suggestions of Respondents. -- A place was provided at the bottom of the questionnaire for the respondent to add any additional comments or suggestions. There were 112 favorable comments, most of these came from School libraries. The largest number of comments reaffirmed the immediate need to provide formal training for both library technical assistants and clerks (33 such comments), 23 wrote that these supportive personnel are very useful, 11 commended the study and action to date, four stated the action has been long overdue and three sent best wishes for success. There were a small number of suggestions relating to adding subjects to the curriculum (e.g. work attitude, and familiarization with data processing and accounting). A few recommended OJT with school work and co-opping. Fourteen comments pertained to the need for training programs, workshops & short courses and night classes at regional campuses or locally. Please see Appendix VIII for a more detailed breakdown of comments by type of library.

There were 30 comments unfavorable, to some degree, to the library technical assistants and clerks; 16 of these were against technicians, 11 were against clerks or aides, three were against both. The majority of these comments preferred on-the-job training to formal training programs... a number of these unfavorable comments were written in conjunction with views concerning the difficulty of obtaining adequate salaries for these personnel.

There were 40 comments related to the problems of salaries and budgets. Fourteen librarians said they were unable to provide an estimate of the salary that might be offered inasmuch as they did not determine salaries or wages. Twelve said their budget was too small or was inadequate for additional help - or that salaries that could be offered were too low (Public libraries led in this complaint, Schools were second). Generally, too low budgets or salaries were identified more frequently in comments relating to library technical assistants than to library clerks or aides. See Appendix VIII for more detailed presentation of comments by type of library.

Chapter III

Discussion, Conclusions, and Recommendations

14. Discussion of the Problem. -- Libraries are required to provide more services for more people than ever before. Faced, at the same time, with shortages of professional librarians, many libraries are freeing their professional staffs from some of their simpler or routine tasks by using more supportive type personnel. For example, library technicians may furnish the public with information about library services, assist persons in locating books and other materials through the use of card catalogs and indexes and answer "ready reference" questions that require only brief consultation of a standard reference text. Technicians also do work behind the scenes -- such as writing routine descriptions (i.e. author, title, edition, publisher, date, no. of pages) of books for the card catalog - many maintain files and records, some operate and maintain audio-visual equipments. Further, library science and communication technology are moving ahead; automation, new media, higher standards and others will require personnel fully qualified at all levels.

Until recently, library professionals did not agree as to the value of technicians (trained at two-year college level) -- however, there is now general and growing agreement that technicians are needed and should be a part of the library services staff. There has not been as much controversy over library clerks or aides - who are generally trained on-the-job and are relegated the more basic and routine duties. The American Library Association (ALA) has announced officially that the titles of these supportive personnel should be "Library Technical Assistants" (normally trained at the two-year college level) and "Library Clerks" (trained on-the-job or in short term courses). Duties and responsibilities have been published and the Library Education Division and Library Administration Division have recognized the value of these supportive personnel and have recommended the development of curricula and standards for their training to strengthen existing and planned programs. So the stage is at least partially set nationally to formalize the library service staff "team." A great step forward.

The primary problem is -- are librarians - and those who have the authority and responsibility over matters such as related budget, personnel and facilities - ready and willing to accept and utilize these supportive personnel in their proper roles? Of course, other problems must also be faced including: recruitment and selection of applicants, offering training programs based and conducted

on standards set by the profession, "control" of supportive personnel such as through examination and/or certification, and provision for career progression for those who are qualified. None of these problems is unsurmountable, and one of th purposes of this report is to contribute to their solution in Indiana, being consistent with professional and national goals.

15. The Survey and Reported Manpower Needs. -- It was decided there was considerable value in getting this problem before all the librarians possible - and in engaging their cooperation. A letter, signed by the presidents of both the Indiana Chapter of the Special Libraries Association and the Indiana Library Association - was used to alert librarians to this study and transmit a questionnaire which was designed to acquire manpower needs data, desired training information, and opinions concerning certification and other matters.

Returns. A total of 1,275 surveys were mailed out, there were 426 useable returns received by the deadline (a one-third response): 255 of these were from School libraries, 99 from Public libraries, 41 from College and University libraries and 31 from Special libraries.* (In each case the return was sufficient for acceptable statistical analysis.)

General Manpower Requirements. Each respondent was asked to report now many library technical assistants and clerks or aides they now had, how many were additionally needed now, and their estimated future requirements. Results are shown in Table 13.

Table 13

Summary of Employment and Projected Requirements

Library Auxiliary	Number You Now (1) Have	Additional Number You (2) Need Now	Number You Estimate You Will Need In (3) Next 5 Years	Average Annual Recurring ** (4) Requirement
Library Technical Assistant	195	246	547	159
Library Clerk or Aide	551	319	765	217

*Note: There were 36 additional returns received after the deadline date. The nature and requirements of these returns were essentially the same as those previously received.

** $\frac{\text{Col. (2) + Col. (3)}}{5}$ = Average Annual Needs (Col. 4)

Library Technical Assistants. -- Table 13 reflects the lack of a formal technician training program in Indiana: there are more job vacancies (246) than there are present technicians employed (195). Annual recurring needs of 159 technicians are requirements stated by the survey respondents... no effort has been made to inflate to the universe (reflecting needs of those not responding or not surveyed). These needs therefore should be interpreted as the lower parameter of requirements. The requirement to meet growth and attrition (Col. 3 for 547 technicians) averages 110 per year: based on a national statement of requirements, it was determined that Indiana's proportional needs for these purposes would be 118 per year -- which serves to validate the reported requirements).

In order to facilitate analysis and planning, all completed questionnaires were sorted by type of library as well as into six geographic regions within the state (see Appendix IV for map). The average annual recurring requirements of 159 library technicians are shown below accordingly:

Table 14

Summary of Requirements for Library Technicians,
by Type of Library and by Region

Type of Library	Average ($\bar{x}$) Annual Recurring Requirement	Type of Library	Average ($\bar{x}$) Annual Recurring Requirement
School	78	College/University	30
Public	42	Special	9

Region	$\bar{x}$ Annual Requirement		Region	$\bar{x}$ Annual Requirement
1 (Calumet)	9	can be combined*	4 (Lafayette)	17
2 (North Central)	19		5 (Central)	52
3 (North Eastern)	24		6 (Southern)	38

*Region 1 is made up only of Lake County and is contiguous with Region 2.

Library Clerks or Aides. -- The proportionately smaller number (compared with technicians) of job vacancies for clerks or aides (319) and the annual recurring requirement of 217 reflect in part the greater feasibility for librarians to train clerks on-the-job. (See Table 13.)

When these requirements for library clerks are sorted by type of library and into regions, the following results:

Table 15

Summary of Requirements for Library Clerks
by Type of Library and by Region

Type of Library	Average Annual Recurring Requirement	Type of Library	Average Annual Recurring Requirement
School	105	College/University	46
Public	55	Special	11

Region	Average Annual Recurring Requirement		Region	Average Annual Recurring Requirement
1 (Calumet)	15	can be combined	4 (Lafayette)	24
2 (North Central)	38		5 (Central)	64
3 (North Eastern)	34		6 (Southern)	42

Note: Respondents were also asked to write in any additional comments or suggestions about the study. The large majority of these comments were in favor of the formal identification and utilization of library supportive personnel and the establishment of related training programs under professional auspices. These comments also reflected recommendation for courses and programs to be provided locally.

15A. Training Program Recommendations. -- In view of the discussion and data presented above - it is recommended that a continuing two-year associate degree program* be developed and offered in Indiana to prepare library technical assistants. The basis of the program should be the criteria and standards provided by the American Library Association (ALA). See Appendix II.

Consideration should also be given to the subjects and levels of training desired by Indiana librarians as depicted in Section 12 and Appendices VII and VIII of this study and as discussed below. It should be recognized that most comments and recommendations are based on traditional library services - which, although realistic - do not include new elements of advancing library science, communications technology and media and new standards. These must also be considered in the formulation of the objectives and courses for library personnel educational programs. Lead instructors should be professional librarians. To the extent feasible, courses should be regular college offerings so credits earned are applicable for transfer and/or academic progression. The program should be developed with the assistance of a Library Training Program Advisory Committee made up of representatives from; State agencies and professional library associations, each major type of library (School and School Media Centers, Public, College/University and Special), and educational institutions. Work study and co-op opportunities, and part-time and night classes should be considered. If the program is offered at more than one locale, close coordination and cooperation is essential. In addition to the complete program, individual short and night courses, work-shops and seminars, should be offered locally wherever sufficient interest warrants. Some form of educational assistance (e.g. refund of tuition or allowed time) should be provided to library employees. Credit for course completion should be transferrable wherever feasible.

It is recommended that a vocational training program be designed for library clerks or aides - also based on ALA guidelines and standards. This certificate-type program should be provided locally based on needs and student interest. This study indicates that sufficient requirements exist which warrant these programs in every region of the State (Regions 1 and 2 combined). Separate courses and work-shops should be offered locally on a needs and student interest bases.

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*Note: A decision must be made in each region as to whether or not be begin this associate degree library technician program. There is no question of the State need for this program, and for local needs in the northern and central regions of the State.

16. Recruitment.* -- With reference to the recruitment of students for library technicians and clerks programs, in addition to the normal practices (which include activities of counselors and advisory committee members, public relations and allied efforts), two other somewhat unique considerations apply that are identified below. It is recommended they be capitalized on.

16A. Recruitment Recommendations. -- (1) This field of work is especially attractive (and applicable) to women over 30 years of age who have raised their children or now have children in school -- women who have the time - and want to help meet the school and teen-age expenses. These women should be the object of specific recruiting efforts. (2) Practicing librarians who come in contact daily with young people should give details and provide encouragement to appropriate potential applicants. Librarians should be provided the necessary counseling materials and should be asked to cooperate.

17. Placement.* -- There have been instances where library supportive personnel type programs have produced graduates for whom no nearby jobs could be found. In some cases (e.g. in a large university), there may be people with excellent educational backgrounds -- such as faculty wives and advanced students -- who are desirous of employment on campus. For some library jobs, these people may be preferable to a two-year library technology course graduate.[14/] Also, numerous job opportunities have been reported in this survey from many cities and towns throughout the state.

17A. Placement Recommendation. -- It is recommended that an active placement service be established in conjunction with every program. This service should have direct liaison with potential employers. Free job placement efforts should be made on behalf of all candidates for graduation and for graduates.

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*Note: Among the reasons for deciding to survey all Indiana libraries, was the recognition of the fact that training programs for supportive personnel could not be successfully established nor graduates employed, unless librarians understood and were in agreement with their utilization and had a voice in related planning activities.

18. Curricula Matters. -- As mentioned earlier, it is essential that training programs for auxiliaries be based upon national objectives and standards that are developed by the library profession (e.g. see Appendix II "Descriptions of Librar. Supportive Staff Personnel and Criteria for Programs to Prepare Library Technical Assistants"). Of course, local needs should also be considered. Aspects of both the traditional library services and of projected changes must be included in planning activities.

In this study, it was decided to obtain additional information as to the level of training in specific subjects that was desired by librarians. The reported desired levels of training are shown in Table 16:

Table 16

Desired Level of Formal Training in Selected Subjects (Averages)

Subjects	Library Technical Assistant	Library Clerk or Aide
Audio-Visual Services (incl. Graphics, T.V., & Equipment)	Average 2.4*	Average 1.5*
Bibliographic Tools	2.4	1.5
Cataloging Procedures	2.2	1.5
Circulation Procedures	2.5	2.0
Library Service to Users	2.4	1.8
Ordering Procedures	2.2	1.6
Periodicals Procedures	2.3	1.7
Others	2.2	1.7
n =	296	312

*The code used was
1. Knowledge of terminology, familiar with procedures and forms.
2. Ability to accomplish assigned tasks and routine library duties.
3. Ability to solve problems and advise others in this subject area.

The desire for library technical assistants to be able to do more than accomplish routine library duties was clearly indicated (on occasion they would also be called upon to solve problems and advise others). Library clerks or aides were expected to perform assigned routine tasks and be familiar with procedures and forms. In general, the rank order of desired levels of training (from highest to lowest) was; circulation procedures, library service to users, bibliographic tools, audio-visual services and equipments, periodicals procedures, ordering procedures, and cataloging procedures. Respondents were also asked to write in additional subjects: secretarial duties such as typing, filing, and office procedures ranked first among these fill-ins; public relations, book mending and book binding were also mentioned a number of times.

18A. Curricula Recommendations. -- It is recommended that program curricula for supportive personnel be based on the objectives and criteria established by the American Library Association and constituent organizations. Traditional library services as well as projected changes must be included. The planning for program initiation, curriculum development and continuing activities (including recruitment, follow-up of graduates to ascertain their employment, salaries and effectiveness) should be accomplished with the assistance of a Library Training Program Advisory Committee - as described above. The suggested level of training in selected subjects and the comments of respondents to this survey should also be weighed carefully in the design of each curriculum.

19. Salary Matters. -- The reported average monthly salary of $426 for library technical assistants compares fairly well with the national beginning salaries for these technicians. (However, this is slightly lower than the average salaries of recent graduates of two-year associate degree programs in other disciplines or fields.) When library technician salaries are examined by type library the following results:

Type Library	Average Monthly Salary	Type Library	Average Monthly Salary
Special	$487	College/University	$429
School	$447	Public	$377

It can readily be seen that the Public library average salary brings the average down considerably.

The reported average monthly salary for clerks or aides was $320; -- again, the Public library brings the average down as shown below:

Type Library	Average Monthly Salary	Type Library	Average Monthly Salary
Special	$411	School	$319
College/University	$328	Public	$291

Special libraries will pay the highest salaries for both library technicians and clerks; their $411 average for clerks is especially noteworthy. There seems little question that if training programs are started, most graduates will tend to seek employment in types of libraries other than Public.

19A. Salary Matter Recommendations. -- It is recommended that Public libraries raise the level of salary offerings as soon as possible for both library technical assistants and clerks or aides in order to be more in line with other types of libraries. Also, School libraries should raise their salary offerings for clerks or aides as soon as practicable. A beginning monthly salary of at least $450 for library technical assistants (two-year college degree level) and $350 for fully qualified clerks or aides is recommended as near-term goals (assuming full time employment and a 40 hour average work week).

It is further recommended that the appropriate details of this study be brought to the attention of superintendents, members of boards, councils or other decision makers in order to gain a better appreciation of library services, obtain authorization for the utilization of library supportive personnel, and obtain necessary resources.

20. Certification Matters. -- Eighty-five percent of the survey respondents were agreed that library technical assistants should be certified in some way. (More than 90% of the 214 answers to this question from School libraries was in favor of technician certification.) This desire to "control" is consistent with national trends in other recognized sub-professional or supportive type occupations wherever professionals in that particular field of work are instrumental in the design of related policies, plans or programs.

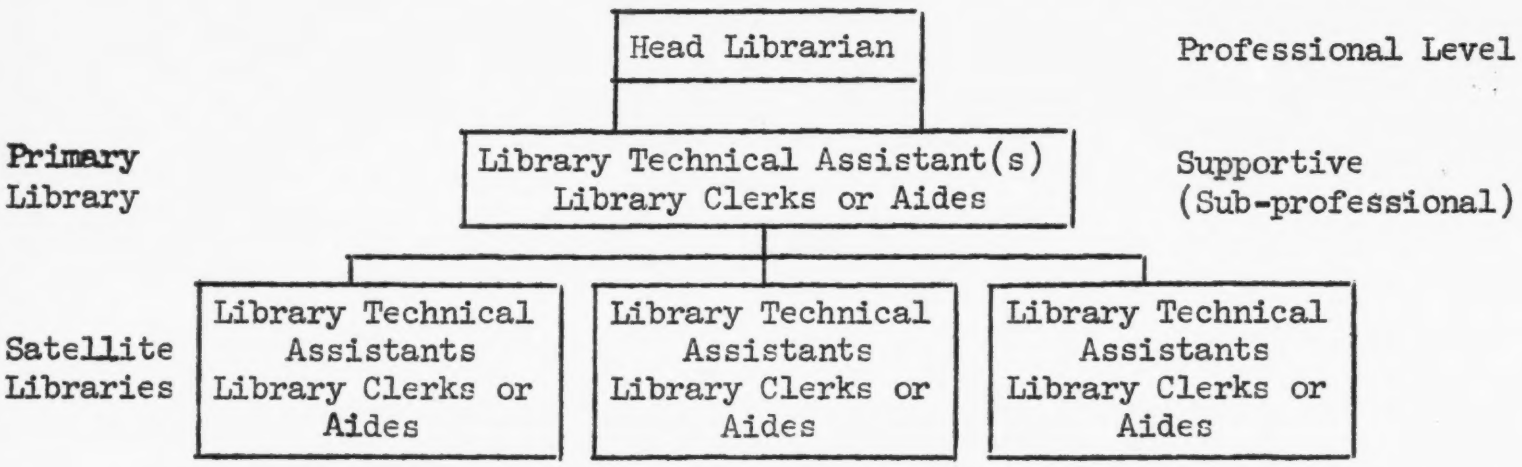
20A. Certification Matter Recommendations. -- It is recommended that the American Library Association establish broad National standards for the certification (or registration) of library technical assistants. These should be formulated with due input from constituent state associations. Indiana should then develope State standards and procedures (consistent with these National standards) in order to facilitate both intra- and inter-State communications, administration, reciprocity agreements and the like.

21. Utilization of Supportive Personnel. -- The effectiveness of a professional may be increased through the proper utilization of supportive (- or auxiliary - or sub-professional) personnel in many instances. Working as a team, mutually supporting, advancing together, many activities are enhanced with properly defined occupational titles, duties and responsibilities, training and/or experience and reasonable controls. However, it is necessary for all to be qualified, ethical, and practice within their respective roles. This is being done in more and more fields of work: it is one solution to the problems of increasing complexity and shortages of highly trained personnel.

Members of the Library Advisory Committee assisting the author in this study are agreed that the time has come for planning and implementing actions which will result in the recognition of library supportive personnel as team members. A possible plan for their utilization (e.g. within a School System) is depicted pictorially in Figure 1.

Figure 1

The Library Team



In Figure 1, a professional librarian is in full charge of and supervises a primary library and designated satellite sites and/or shift operations. Necessary staffs would be provided in all instances, but authority for routine operations would be delegated to a responsible library technical assistant at the satellite library - or during the particular shift or specific period of time (night work, study hall periods, vacation periods of head librarian, etc.).

21A. Utilization Recommendations. -- It is recommended that library supportive personnel be fitted into a planned organizational pattern and function under established operational procedures. The professional librarian should be responsible for the total library service and supervise these auxiliaries. Professional librarians should receive training in the principles of organization and management both while preparing for their profession and in-service. Planning of operations and procedures, supervision, preparation of job descriptions, training, and related matters should be included in such training. Work-shops and seminars should be conducted for librarians to exchange ideas, work out solutions to common problems, learn about latest methods and techniques, and jointly plan for improvements in library services.

22. Average Numbers of Library Supportive Personnel, per Library. -- In this study, it was found that there was an average number of one library technical assistant and two library clerks jobs per library surveyed. (Most of the technicians' jobs were vacant.) This average varied from less than one technician per School library to more than two technicians per College/University library. (See Table 7 for details.) The ratio of one technician per two clerks or aides was generally consistent for all types of libraries.

22A. Recommended Ratios of Supportive Personnel for Planning Purposes. -- It is recommended that for making broad estimates of manpower requirements, a ratio of one library technical assistant for every two qualified library clerks or aides be used. For estimating needs by specific type of library, the factors presented in Table 7 should be applied.

Appendix I

Selected Bibliography

Reference Number	Title & Identification
1.	"A Vote for Library Technicians," by Mrs. Rose Koryta Wolf, Librarian, Wickliffe Public Library, Wickliffe, Ohio; published in the Library Occurrent, Vol. 22, No. 12, Nov. 1968, Indiana State Library, 104 North Senate Avenue, Indianapolis, Indiana 46204, p. 328.
2.	"Technical Library Assistant Training in the U.S. - Progress and Problems," by Margaret I. Rufsvold, Graduate Library School, Indiana University, Bloomington, Indiana, published in the Library Occurrent, Vol. 22, No. 12. Ibid, p. 319.
3.	"Statement on Junior College Library Assistant Training Programs," by ALA Library Education Division, Executive Board; LED Newsletter No. 53, March 1965, pp. 2 and 3.
4.	"Indiana's Needs for Assistants in Veterinary Medical Practice" Manpower Report 68-2, by Dean E. V. Morse, D.V.M., and Prof. J. P. Lisack, Purdue University, May 15, 1968.
5.	"A Committee Report: Library Manpower Problems," ALA Bulletin 62:387-397, April, 1968.
6.	"The Subprofessional or Technical Assistant: A Statement of Definition," ALA Bulletin 62:387-397, April, 1968.
7.	Ibid p. 397
8.	"Library Technician," by Priscilla Aubrey Baker, Occupational Outlook Quarterly, reprint, Vol. 12, No. 4, U.S. Department of Labor, Bureau of Labor Statistics, December, 1968.

Appendix I (Continued)

Selected Bibliography

Reference Number	Title & Identification
9.	"Accepted Salaries of Graduates - 1968," Purdue University Placement Service Report, W. Lafayette, Indiana 47907.
10.	The American Registry of Radiologic Technologists, Executive Director, R. C. McGowan (ARRT), 2600 Wayzata Blvd., Minneapolis, Minnesota 55405.
11.	"The Certification of Engineering Technicians" (pamphlet), Institute for the Certification of Engineering Technicians (Sponsored by the National Society of Professional Engineers), 2029 K Street, N.W., Washington, D.C. 20006.
12.	The American Society of Radiologic Technologists, Executive Secretary, G. J. Eilert (RT), 537 So. Main Street, Fond du Lac, Wisconsin 54935.
13.	The American Society of Certified Engineering Technicians, ASCET Information Center, P.O. Box 40230, Everman, Texas 76140.
14.	Letter of September 23, 1969 to author from Mr. James Kennedy, Reference Librarian, Lilly Library, Earlham College, Richmond, Indiana, citing reservations of Lester Asheim, former dean of the library school at the University of Chicago.

Criteria for Programs to Prepare Library Technical Assistants*

The following report was approved by the Board of Directors of the Library Education Division of the American Library Association at the ALA Midwinter Meeting, January 1969. The report now represents official policy of the Division.

This document was developed by the LED Interdivisional Committee on Training Programs for Supportive Library Staff and is intended to serve as a guide for persons planning programs for library technical assistants and for the evaluation of existing programs for library technical assistants. The programs are conceived as introductory preparation of personnel to fill beginning positions in the range of library technical assistant positions in a variety of situations.

I. LIBRARY TECHNICAL ASSISTANTS AND FORMAL PROGRAMS

A. General statement

1. It is recognized that there are several ports of entry to library technical assistant positions. Formal programs in community colleges** constitute one way and are developing rapidly in many parts of the United States.
2. Training by the employing library has been and remains an important factor. Completion of a formal program in a community college will not eliminate the need for on-job training but may alter the character and amount of on-job training required.
3. These criteria deal with formal post-secondary school level programs for the preparation of library technical assistants. They are intended to be of assistance to community and junior college administrators and others concerned with such programs and are intended to serve (a) for the planning of new programs and, (b) for the evaluation of existing programs.

B. Library technical assistants as part of the supportive staff

1. "Library technical assistants" as used in this statement indicates one category of supportive staff in libraries of all types. Supportive staff includes all library employees who support the work of professionally educated librarians.
2. The following groups of supportive staff recur in many classification plans:
   a. Pages -- employees used principally for shelf work or moving books but often assigned some additional responsibilities of a clerical nature such as physical preparation of books.
   b. Clerks or clerical staff -- persons holding positions in which the common business practices are the primary duties even though in-service training may relate those practices to library situations. Many library systems have numerous levels of service in this category with promotional opportunities culminating in a position as administrative assistant.

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* American Library Association Bulletin, June 1969, pp. 787-794.

** The term "community college" as used in this document refers also to junior colleges.

Appendix II (Continued)

c. Library technical assistants (sometimes called library technicians) -- persons with some specialized training (provided on the job or through formal classes or programs) to perform duties in one or more fields, from technical processing to circulation work, preparation of publicity, to reference work of a directional or fact-finding type. Grades or levels of positions in the total spectrum of this non-professional classification may number six or more in large libraries or systems. Education and experience of applicants may qualify them for entry above the minimum salary for the class.
d. Library assistants -- college graduates with a bachelor's degree, who may have taken some library science course work but do not hold a library science master's degree, whose breadth of undergraduate education enables them to work effectively in simple reference searches and uncomplicated guidance to general reading materials. Special talents, professional course work, and library experience will increase the range of his initiative and judgment.
e. Trainees -- college graduates employed in a preliminary professional status while obtaining professional education for library service. Appointments are usually for a limited period at the end of which the employee moves to the professional group or takes a non-professional status.
f. Student assistants -- many schools, colleges, and universities are fortunate in having part-time employees whose knowledge, skills, and abilities enable them to perform many of the supportive service duties (described in item c., above).
g. Excluded from the supportive staff for the purpose of this report are:
   (1) Librarians.
   (2) Subject, language, or other professional specialists. Personnel employed for duties in which their education or ability in a particular field is the prime requisite are often classified in special professional categories.

3. Elaborations on the above definitions are available in "The Subprofessional or Technical Assistant: a Statement of Definition," ALA Bulletin, April 1968, pp. 387-97, and in Lester E. Asheim's "Education and Manpower for Librarianship," ALA Bulletin, October 1968, pp. 1096-1106.

C. The work of the library technical assistant

1. The library technical assistant performs non-professional tasks under the direction of a librarian or other supervisor. Identification of tasks assigned to library technical assistants has been aided by modern management practices and mechanization of some library operations, whereby complex operations or functions have been divided into a series of individual tasks.
2. The work of the library technical assistant may fall within one functional area of library operation. Examples are circulation system, technical processes, interlibrary loan, serial records, and control. Often, in small library units, the library technical assistant performs duties in a variety of such areas.
3. The tasks and types of work assigned to library technical assistants are more fully outlined below under I., E. By way of definition it may be useful to state three exclusions from the work of the library technical assistant:
   a. Tasks which require a full professional knowledge of librarianship and exercise of judgment based on a broad knowledge of books and other library resources, their intellectual organization or their educational, informational, cultural, or scholarly use. Establishment of policies, materials selection, complex information, and guidance services, are illustrations.

b. Work requiring other professional, scientific, or specialized education in the subject matter. Artists, editors, public relations, and other professional specialists fall within this category, as do positions for which language or subject competence are of primary importance.
c. Work in which the primary duty consists of typing, filing, stenography, or other tasks of a general office nature which can be done by individuals with office-type specialized training or experience, e.g., secretary, personnel clerk, accounts maintenance clerk, file clerk.

D. Abilities required in library technical assistants

1. Sound basic intelligence demonstrated by satisfactory completion of secondary school education and ability to work at a level above the clerk.
2. Training or experience in library techniques beyond that obtained by a clerk or typist, but without other depth of theoretical knowledge or subject background expected of a librarian.
3. Knowledge of basic clerical skills such as typing and filing.
4. Since duties will involve work with the library's public and staff, possibly in a supervisory capacity, a stable personality, service orientation, and ability to adapt to people are important qualities.
5. The ability to use independent judgment within the ranges of established choices to make decisions and recognize problems to be referred to the supervisor.
6. Ability to understand and follow written and oral directions, to communicate effectively verbally and in writing.
7. Aptitude and interest in library work and for work requiring exactness in detail.

E. Duties and responsibilities at the library technical assistant level

1. Library technical assistants provide support and assistance to professional librarians and may supervise clerks or other technical assistants.
2. Their duties are related to a variety of library functions. They may include the performance and/or supervision of:
   a. The mechanical preparation of library material.
   b. The physical upkeep of library material.
   c. Care of shelves, files, and equipment.
   d. Circulation work such as registering borrowers, explaning lending rules, reserving books for users, overdues and fines, charging and discharging books, keeping records.
   e. Acquisitions work such as ordering publications (exclusive of selection), checking lists, keeping records, searching bibliographical data.
   f. Cataloging work such as processing added copies and new editions, ordering cards, assigning book numbers, cataloging fiction, shelf-listing, filing, and physical maintenance of catalog.
   g. Information services work such as
      (1) Answering directional questions or factual questions involving use of a limited group of reference tools.
      (2) Locating bibliographical information for which complex searching is not required.
3. When the public, academic or special library contains multi-media materials, uses mechanical processing, or operates a specialized information system, these positions may require ability to use and handle appropriately related materials and equipment. Similarly, media centers operating in schools will have positions requiring special abilities to use and handle appropriately related materials and equipment.

Appendix II (Continued)

4. For further guidance, see U.S. Civil Service Commission, Position-Classification Standards, for GS 1411, Library Technician Series, released under Transmittal Sheet #62, June 1966.

II. PLANNING PROGRAMS

A. Local advisory committees

1. Any community or junior college contemplating a program for library technical assistants should, as a first step, establish a local advisory committee.
2. This committee should be appointed in accordance with the administrative policy of the institution and report to the president, the board, or other college administrator as may be appropriate.
3. Membership on the local committee should include:
   a. A representative from the state library designated by the state librarian.
   b. The director of a major local public library or his designate.
   c. A school library supervisor at the state or local level or his designate.
   d. The librarian of a local four-year academic institution or his designate.
   e. The head of a local special library or his designate.
   f. A representative named by the president or other appropriate officer of the state library association and/or local chapter of the Special Libraries Association.
   g. The librarian and the LTA program director of the local community college should be ex officio committee members.
   h. Others might include: local or state civil service board members, placement counselors, deans of graduate library schools or their designates, department heads or supervisors in local libraries, etc.
4. Membership on the local advisory committee should be for two-three years with staggered terms.
5. Before any course is planned, announced, or offered, the local advisory committee should:
   a. Investigate local needs for such a program. No program should be announced or started without a positive recommendation from the local committee after such investigation.
   b. Advise on the qualifications of the program director.
   c. Advise on the nature and content of the curriculum based on total program objectives. (See VI., A.)
   d. Insure that program planning and resources are adequate prior to initial course offerings.
6. The committee will provide continuing liaison between the community college and employers of supportive library staff personnel.
7. The committee should insure that programs meet state and national standards.
8. The committee should meet as regularly as needed and should submit a formal annual report to the appropriate community college administrator, preferably the president.
9. It is also recommended that local advisory committees communicate freely at state, regional, and national levels and, if appropriate, establish formal organizations and channels to facilitate such communication.

Appendix II (Continued)

III. ADMINISTRATIVE AND FINANCIAL FRAMEWORK FOR PROGRAMS

A. This is a specialized, occupational, non-baccalaureate program. The program should have its own full-time director other than the administrator of the college library. The director would be expected to have a master's degree from an AIA accredited school. The director should never be the sole member of the instructional staff.

B. Financing of the program should be a part of the instructional budget of the college and not a part of the regular library budget.

C. The program should be financed at a level and in a manner commensurate with other technical specialty instructional programs.

IV. FACULTY

A. Minimum number of faculty for technical specialty programs

1. In addition to a full-time program director (department head) there should be one (1) full-time faculty member as a minimum.
2. The following document will be useful for general guidance: U.S. Department of Health, Education, and Welfare, Office of Education. Criteria for Technician Education, A Suggested Guide. (OE 80056). Washington, D.C. Government Printing Office, 1968.

B. Qualifications

1. Educational qualifications of faculty members for programs for library technical assistants require that they have demonstrated competence in the areas in which they will teach and such certification as regional accreditation agency policies may require.
2. Practical and recent working experience in a library.
3. Personal and attitudinal qualifications which will enable the faculty member to teach effectively and inspirationally should be considered in the selection, appointment, assignment, and retention of teaching staff.

C. Teaching loads

1. Should be commensurate with teaching loads of faculty in other instructional departments.
2. Preparation time must be provided.

D. Encouragement of professional development

1. All teachers must be encouraged to up-date their knowledge of current library practice. Their knowledge of teaching techniques and innovations in education must continue to grow and expand.
2. Membership in professional library and educational associations should be encouraged together with active participation in professional association work at local, state, regional, and national levels.

Appendix II (Continued)

V. FACILITIES

A. Library materials and library space

1. Since library resources are essential support for the curriculum, programs for library technical assistants should not be started until the library meets the AIA Standards for Junior College Libraries in terms of space, collection, organization of materials, staff, and other minimum standards which will directly influence the quality of the program.

B. Classrooms and faculty offices should have immediate access to the library but should not interfere with library service to the entire college.

VI. CURRICULUM

A. Objectives

1. The curriculum should be based upon a set of clearly stated objectives for the total program.

B. Course distribution

1. Generally, a program will be divided into three broad areas:
   a. General education courses
   b. Library technical specialty courses
   c. Courses related to the library technical specialty program.
2. General education courses should be those planned for the transfer student and should constitute approximately 50 per cent of the total program, e.g., communication skills, English composition, social sciences, humanities, physical sciences, etc.
3. Library technical specialty courses should constitute approximately 25 per cent of the total curriculum and should include such areas as:
   a. Introduction to libraries and library operations, support operations for public services (circulation, information, etc.), support operations for technical services.
   b. Laboratory experience is important and should be incorporated in the areas listed in a., above.
   c. Practical experience and supervised field work (practicum) in local libraries in addition to the local community college library.
   d. Audiovisual services in libraries (including laboratory experience).
   e. Not all library technical assistants perform the same tasks. Therefore, some variations in curricula may be desirable. The point to be stressed here is that certain program concentrations may be developed, and not all students need take the same courses.
   f. It should be clearly understood that the first two years of work taken in a community college relate to the lower division of an undergraduate curriculum (i.e., the first two years). Lower-division undergraduate courses are neither substitutes nor waivers for upper-division undergraduate or graduate level courses.
4. Appropriate related courses including business and office skills should constitute approximately 25 per cent of the total curriculum, e.g., typing, business mathematics, office machines, data processing, office management. Preparation of library technical assistants for particular types of libraries, e.g., school, hospital, etc., will require courses related to these particular library situations.

Appendix II (Continued)

C. Course sequence

A logical sequence of courses should be established. Normally in the first semester of the first year, the student would take only one library course, while he carries general academic courses. Field work should be preceded by established course prerequisites to make the field experience meaningful.

VII. STUDENT RECRUITMENT AND SELECTION

A. Recruitment

1. Publicity relative to the program should be reviewed by the local advisory committee. It should clearly state the program objectives emphasizing preparation for employment as a skilled technical assistant.
2. While the general education (liberal arts) courses are transferable there should be no suggestion of the transferability of the technical specialty courses towards a baccalaureate or graduate professional degree program.

B. Student selection

1. Admissions should be based on regular local institutional requirements.
2. Admissions must be realistic in terms of the expectations of employing libraries whose needs can be determined through the assistance of the local advisory committee.
3. Personal interviews by the LTA program director with prospective students should be required.

VIII. STUDENT RECORDS

A. Adequate student records should be maintained in the office of the program director to assist both faculty and students during and after admission as well as subsequent to completion of the program.

IX. STUDENT PLACEMENT AND FOLLOW-UP

A. Placement

1. Graduates should be aided in every possible way in finding suitable employment.
2. Prospective employers should be provided with statements of the qualifications of graduates.
3. Placement of graduates is an important and multi-faceted responsibility involving the program director, the faculty, and other members of the community college staff.
4. Outstanding and successfully placed graduates and their employers are the most effective advertisers of the program.

B. Follow-up

1. Periodic follow-up studies of graduates are imperative and enable the community college to:
   a. Improve curriculum and teaching techniques.
   b. Evaluate training effectiveness.
   c. Maintain good employer-employee relationship.
   d. Continue evaluation of total program.

Appendix II (Continued)

X. CONTINUING EDUCATION

A. The community college, the employing library, and other agencies have responsibility to insure the availability of opportunities for continuing education for the student who has completed his basic two-year program.*

B. The need for appropriate* continuing education cannot be over emphasized in these criteria.

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*Note: The author views "appropriate continuing education" to include academic work specifically toward a bachelor's degree, as well as other general education, specialized library and related courses. Seminars, work shops, conferences, professional meetings, and the like are also part of continuing education in the broadest sense.

INDIANA LIBRARY ASSOCIATION

SPECIAL LIBRARIES ASSOCIATION

Indiana Chapter

May 9, 1969

Dear Librarian:

We are all aware of the problems of recruitment and training of library assistants. Many other states have initiated a variety of training programs with encouraging results. With your help, we can identify the needs in our state and begin planning for the programs needed most. This effort is being supported by the Indiana Library Association, the Indiana Chapter of the Special Libraries Association, and the State Library Certification Board.

Much has been written about the two levels of library supportive personnel. We are using the titles of Library Technical Assistant for those having training comparable to two years of appropriate college work, e.g. the graduate of an Associate Degree program in library science, and Library Clerk or Aide, normally having about six months' post-high school vocational training and experience in library work.

A two year curriculum for Library Technical Assistants could be similar to the college technology courses now offered in other fields. It could include some liberal arts as well as information courses and specialized technical training necessary for library work. The instructors in library techniques would be experienced librarians with degrees from American Library Association accredited institutions. If the student wants to continue his education later, this should be possible. The three to six-month program could take up studies of major reference tools, telephone techniques, use of the card catalog, public relations and library ethics, classification schemes (both LC and Dewey), binding techniques, procedures for ordering supplies, filing and a review of typing.

Depending on your response to this questionnaire, plans can be made to offer appropriate associate degree and/or vocational training programs. Any training offered in the state should be in line with the criteria published by the Library Education Division of A.L.A.

Please complete the questionnaire so we will have the necessary data to help you by planning for training the people you need.

Sincerely yours,

INDIANA LIBRARY ASSOCIATION

Harold J Sander

Harold Sander, President

INDIANA CHAPTER S.L.A.

Ann Kerker

Miss Ann Kerker, President

LIBRARY AUXILIARY PERSONNEL
Information Survey

Please fill out and return to:
Prof. J. P. Lisack, Director
Office of Manpower Studies SCC-A
Purdue University
Lafayette, Indiana 47907

Your Name: _____

Address _____

Name of Library _____

Type of Library: (Please check one)
School ___ College/Univ. ___
Public ___ Special ___

1. Personnel requirements. Please enter numbers in blank spaces.
Library Technical Assistant is normally a graduate of a two year associate degree program in Library Science. Library Clerk or Aide will have about six months of specialized library vocational training.

	Number you now have	Additional number you need now	Number you estimate you will need in the next 5 years*	Approximate monthly salary you would offer new graduates
Library Technical Assistant				
Library Clerk or Aide				

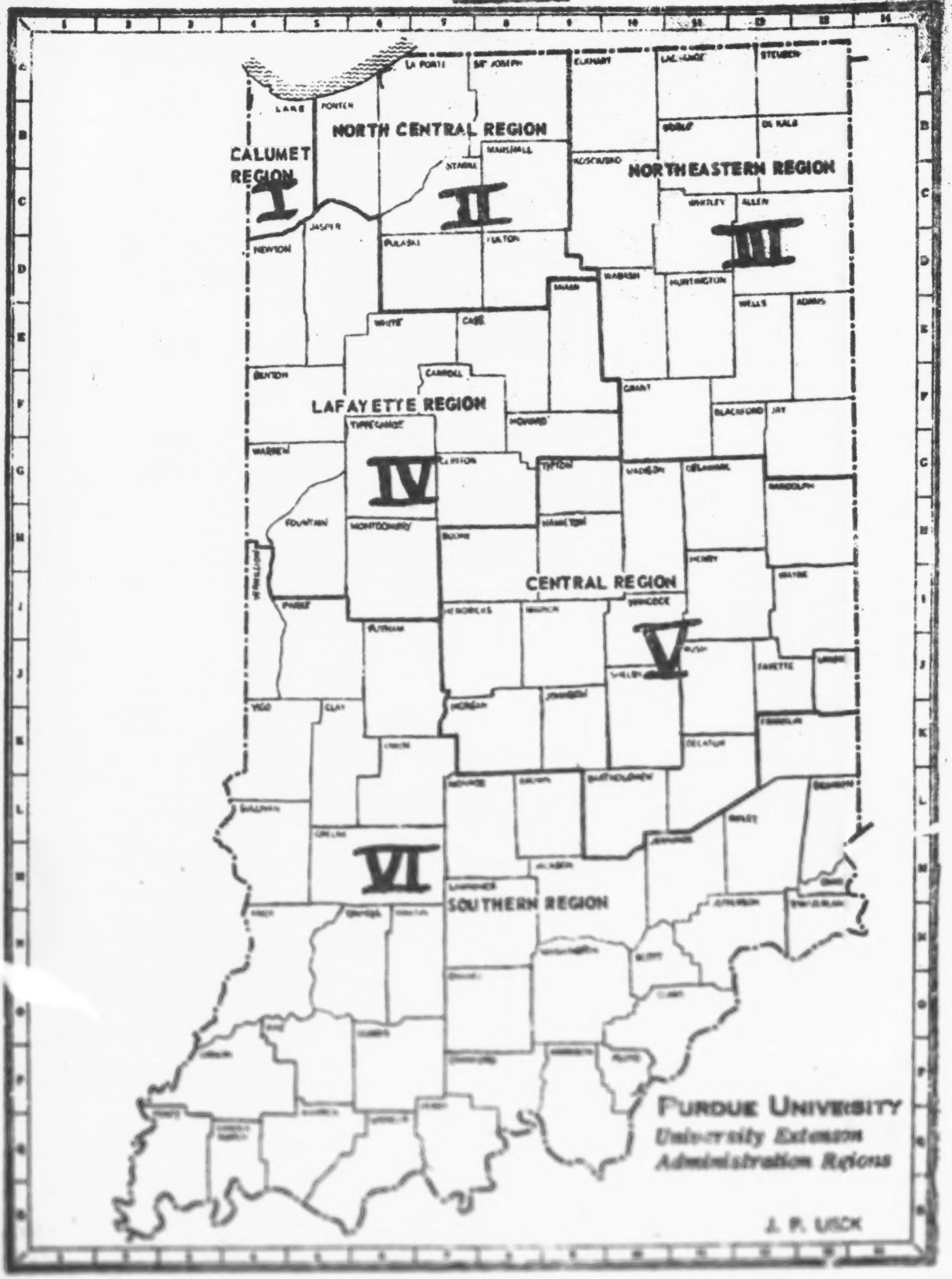
*Number needed to fill future vacancies due to attrition and for new jobs.

2. Do you believe Library Technical Assistants should be certified? Yes ___ No ___

3. In formal training programs, what level would you expect in each subject?
Please enter a 1 for Knowledge of terminology, familiar with procedures and forms,
2 Ability to accomplish assigned tasks and routine library duties, or
3 Ability to solve problems and advise others in this subject area.

Subjects	Library Technical Assistant (Enter 1, 2, or 3)	Library Clerk or Aide (Enter 1, 2, or 3)
Audio-Visual Services including Graphics, T.V., & Equipment		
Bibliographic Tools		
Cataloging Procedures		
Circulation Procedures		
Library Service to Users		
Ordering Procedures		
Periodicals Procedures		
Other (Please Identify)		

4. Comments or Suggestions:


NORTH CENTRAL REGION
CALUMET REGION
NORTHEASTERN REGION
LAFAYETTE REGION
CENTRAL REGION
SOUTHERN REGION
I
II
III
IV
V
VI
LAKE
PORTER
LA PORTE
ST. JOSEPH
ELKHART
STEUBEN
NOBLE
DE KALB
LAGRANGE
STARKE
MARSHALL
KOSCIUSKO
WHITLEY
ALLEN
JASPER
NEWTON
PULASKI
FULTON
WABASH
HUNTINGTON
WELLS
ADAMS
WHITE
CASS
MIAMI
BENTON
CARROLL
GRANT
BLACKFORD
JAY
TIPPECANOE
HOWARD
WARREN
CLINTON
TIPTON
MADISON
DELAWARE
RANDOLPH
FOUNTAIN
MONTGOMERY
BOONE
HAMILTON
HENRY
WAYNE
PARKE
PUTNAM
HENDRICKS
MORGAN
JOHNSON
SHELBY
HANCOCK
RUSH
FAYETTE
UNION
VIGO
CLAY
DECATUR
FRANKLIN
MARTIN
GREENE
DAVIESS
DUBOIS
PERRY
CRAWFORD
HARRISON
FLOYD
CLARK
SCOTT
JACKSON
JEFFERSON
SWITZERLAND
OHIO
DEARBORN
RIPLEY
JENNINGS
JEFFERSON
RIPLEY
OHIO
DEARBORN
PURDUE UNIVERSITY
University Extension
Administration Regions
J. P. USICK

Appendix V

Average Number of Employees, Job Vacancies, and Future Requirements in Supportive Jobs, by Type of Library

Discussion. -- In order to get an idea of approximately how many library technical assistants and library clerks or aides - on the average - are employed in each type of library, Table 17 has been constructed to show the average number of these auxiliaries currently employed, needed now (vacancies), and total of these two items for each type of library.

From Table 17, it can be seen, that on the average, there are approximately 1.6 Library Technical Assistants now employed in each College/University library, (can be read 16 technicians per 100 libraries). Public libraries report .77 technicians are employed per library while Special libraries report .65 per library. There are approximately .14 technicians in each School library (or 14 per 100); this represents the lowest number per library of any type library responding.

Likewise, from Table 17, it can be seen that on the average, there are approximately 3.3 Library Clerks or Aides now employed in each College/University library. Public libraries report 2.1 per library while Special libraries report 1.0 per library. There are approximately .67 clerks per School library (or 67 per 100); this ratio again represents the lowest number per library of any type library responding.

In general, College/University libraries have the largest number of Library Technical Assistants and Library Clerks per library; whereas, School libraries have the smallest number of both kinds of auxiliaries per library. It is of interest to note that the rank order of the average number of auxiliaries currently employed by types of libraries for technicians is exactly the same as the rank order for the clerks. Thus, a substantial correlation exists between the number of Library Technical Assistants and Library Clerks or Aides, (when checked statistically it turns out to be r = .97).

At present, the ratio of Library Technical Assistants to Library Clerks or Aides is .46 to 1.29 based upon the 426 responding libraries' survey returns. Thus, for any 100 libraries (irrespective of type) there are on the average 46 Library Technical Assistants and 129 Library Clerks or Aides currently employed. This is equivalent to saying that on the average each library now has ½ technician and 1¼ clerks or aides. If the total current need for the technicians and clerks could be met, the ratio would be 1.04 to 2.04 which is equivalent to saying that under the assumption the needs could be met, on the average, each library would have 1 technician and 2 clerks. Thus, it can be concluded that the current total needs are only being half met.

Appendix V (Continued)

Table 17

Average Number of Auxiliaries Currently Employed, Needed Now, and Total for Each Type of Library (per library).

Type of Library:	Number You Now Have (per library)	Additional Number Needed Now (per library)	Total (per library)
	LIBRARY TECHNICAL ASSISTANT		
School	.14 (L)	.58 (2H)	.72 (L)
Public	.77	.58 (2H)	1.34
College/University	1.56 (H)	.78 (H)	2.34 (H)
Special	.65	.29 (L)	.94
Total	.46	.58	1.04
	LIBRARY CLERK OR AIDE		
School	.67 (L)	.75 (2H)	1.42
Public	2.13	.56	2.69
College/University	3.34 (H)	1.54 (H)	4.88 (H)
Special	1.03	.36 (L)	1.39 (L)
Total	1.29	.75	2.04

(L) - lowest among types of libraries
(H) - highest among types of libraries
(2H) - 2nd highest among types of libraries

Sample Calculation of Average Number of Auxiliaries Currently Employed, Needed Now, and Total for Each Type of Library and for Each Region. -- Refer to Table 15 . Under Library Technical Assistan , School libraries: First, the "Number You Now Have" per library (equals .14) is computed by taking the "Number You Now Have" from Table 3 for School libraries (equals 35) and dividing this by the "Total Number of Responses" from Table 1 for School libraries (equals 255) - therefore, 35/255 = .14. Second, the "Additional Number Needed Now" per library (equals .58) is obtained by taking the "Additional Number Needed Now" from Table 3 for School libraries (equals 148) and dividing this by the "Total Number of Responses" from Table 1 for School libraries (equals 255) - therefore, 148/255 = .58. Third, the "Total per library" (equals .72) is simply the sum of the "Number You Now Have per library" for School libraries (equals .14) and the "Additional Number Needed Now per library" for School libraries (equals .58) -- therefore, .14 + .58 = .72. The remaining figures are obtained in a similiar fashion by extracting any specific type library figure from Table 3 (for Library Technical Assistants) or Table 4 (for Library Clerk or Aide) and dividing this by the respective number of responses for the specific type library obtained from Table 1.

Appendix VI

Average Salaries as Reported by Types of Libraries by Region

Library Technical Assistant

Type: \ Region:	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	$\bar{x}$ Total
School	$470	$411	$447	$505	$436	$441	$447
n =	5	6	11	2	22	14	60
Public	432	363	392	333	387	383	377
n =	4	6	6	8	13	4	41
College/Univ.	-	363	437	456	460	413	429
n =	-	2	2	5	4	4	17
Special	550	-	480	550	461	510	487
n =	1	-	3	1	6	2	13
Total	$463	$386	$436	$407	$428	$432	$426
n =	10	14	22	16	45	24	131

Library Clerk or Aide

Type: \ Region:	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	$\bar{x}$ Total
School	$356	$306	$345	$281	$318	$308	$319
n =	7	12	12	6	28	15	80
Public	351	262	256	272	296	309	291
n =	4	9	5	8	14	4	44
College/Univ.	360	271	375	321	378	305	328
n =	1	2	1	7	4	4	19
Special	450	-	393	450	412	390	411
n =	1	-	2	1	7	2	13
Total	$362	$271	$329	$295	$329	$314	$320
n =	13	23	20	22	53	25	156

Appendix VII

Summary of Respondents Reporting Desired Subjects and Levels of Training in "Other (Please Identify)" Column of Questionnaire

By Type of Library

SCHOOLS	Library Technical Asst.	Library Clerk or Aide
Secretarial Duties		
Typing	2/ 2.0*	4/ 1.3*
Filing	1/ 2.0	2/ 1.5
General	-	1/ 3.0
Public Relations	1/ 3.0	1/ 2.0
Study Halls	1/ 3.0	2/ 2.5
Bulletin Boards & Supplies	2/ 2.5	1/ 2.0
Unidentified	1/ 2.0	1/ 1.0
Total	8/ 2.4	12/ 2.8

PUBLIC	Library Technical Asst.	Library Clerk or Aide
Secretarial Duties		
Typing	1/ 2.0	1/ 2.0
Public Relations	4/ 3.0	4/ 2.0
Book Mending	2/ 2.5	2/ 3.0
"Bookmobile"	1/ 3.0	1/ 1.0
Business Management	1/ 3.0	1/ 1.0
Total	9/ 2.8	9/ 2.0

COLLEGE/UNIVERSITY	Library Technical Asst.	Library Clerk or Aide
Secretarial Duties		
Typing	1/ 2.0	1/ 3.0
Filing	2/ 2.5	2/ 2.5
General	1/ 3.0	1/ 2.0
Book Binding	1/ 2.0	2/ 1.5
Total	5/ 2.4	6/ 2.2

SPECIAL	Library Technical Asst.	Library Clerk or Aide
Secretarial Duties		
General	1/ 2.0	1/ 3.0
Basic Computer Oper.	1/ 2.0	1/ 2.0
Medical Terminology	1/ 2.0	1/ 1.0
Total	3/ 2.0	3/ 2.0

Totals By Subjects

	Library Technical Asst.	Library Clerk or Aide
Secretarial Duties		
Typing	4/ 2.0	6/ 1.7
Filing	3/ 2.3	4/ 2.0
General	2/ 2.5	3/ 2.7
Public Relations	5/ 3.0	5/ 2.0
Book Mending	2/ 2.5	2/ 3.0
Book Binding	1/ 2.0	2/ 1.5
"Specifics" to Type Library	8/ 2.5	8/ 1.6
Total	25/ 2.5	30/ 2.0

*1st number denotes number of responses (i.e. 4/ 1.3 indicates four responses).
2nd numbers indicate average desired level of training based on scale below:

1. Knowledge of terminology, familiar with procedures and forms.
2. Ability to accomplish assigned tasks and routine library duties.
3. Ability to solve problems and advise others in this subject area.

Appendix VIII

Summary of Comments of Survey Respondents

Summary of Favorable Comments

	School		Public		College/ University		Special		Total	
Subject Areas of Comments	LTA*	LC/A*	LTA	LC/A	LTA	LC/A	LTA	LC/A	LTA	LC/A
Reaffirming that the need exists for Library supportive personnel	10	13*	-	-	4	2	2	2	16	17
The usefulness of such auxiliaries	6	8**	1	-	3	3	1	1	11	12
Commendation of approach to the problem : study and action		6***		-		4		1		11
This action has been long overdue		2		1		1		-		4
Best wishes for success in establishing programs.		1		1		1		-		3
Suggested areas the curriculum should cover:										
Group dynamics and work attitude	3	3	-	-	-	-	-	-	3	3
Understanding of children	-	1	-	-	-	-	-	-	-	1
Courses relating value or librarians service to user	1	1	-	-	-	-	-	-	1	1
Familiarization with audio-visuals	1	-	-	-	-	-	-	-	1	-
Familiarization with data processing	-	-	-	-	1	-	-	-	1	-
Familiarization with accounting techniques	-	-	-	-	1	-	-	-	1	-
Specialization	-	-	-	-	1	-	-	-	1	-
General	-	-	2	1	-	-	1	-	3	1
Recommendations concerning the functions of the educational program:										
Combine school with O-J-T	1	1	1	1	-	-	-	1	2	3
Provide for co-opping	1	-	-	-	-	-	-	-	1	-
Certify only after one years' experience following graduation	1	-	-	-	-	-	-	-	1	-
Testing out of known areas	-	-	1	-	-	-	-	-	1	-
Provide at regional campuses:		-		-		-		-		-
Normal training programs	-	-	2	2	-	-	-	-	2	2
Workshop/short-courses	2	4	-	-	-	-	-	-	2	4
Night classes	-	2	-	-	-	-	-	1	-	3
Vocational courses	1	-	-	-	-	-	-	-	1	-

* LTA denotes Library Technical Assistants, LC/A denotes Library Clerk or Aide.
** Figures on left indicate number of comments as pertain to LTA, figures on right pertain to LC/A.
*** Figures in center indicate number of comments pertaining to both.

Appendix VIII (Continued)

Summary of Comments of Survey Respondents

Summary of Negative Comments

	School		Public		College/ University		Special		Total	
Subject Areas of Comments	LTA*	LC/A*	LTA	LC/A	LTA	LC/A	LTA	LC/A	LTA	LC/A
Prefer on-job-training	3	3**	4	4	2	-	1	-	10	7
Not in favor of formal program	2	-	-	-	1	1	1	1	4	2
Question type and amount of training	-	-	-	-	-	-	1	-	1	-
Procurement of personnel is problem	-		-		-		2		2	
Use of students as aides	-	2	-	-	-	-	-	-	-	2
Use of student wives as assistants	-	-	-	-	1	-	-	-	1	-
Librarians job security would be threatened	1***		-		-		-		1	

Summary of Comments Related to Budgets and Salaries

	School		Public		College/ University		Special		Total	
Subject Areas of Comments	LTA*	LC/A*	LTA	LC/A	LTA	LC/A	LTA	LC/A	LTA	LC/A
Salaries are determined by board or other than librarian	10***		2		-		2		14	
Budget too small for additional help to be hired	3**	1	5	3	-	-	-	-	8	4
Salaries are too low (insufficient)	2	-	3	4	-	-	-	-	5	4
Implied animosity (expression of grievance) toward financial governing body	2	-	1	1	-	-	-	-	3	1
Claim - will match salaries of similiar libraries: need assistance	-	-	1	-	-	-	-	-	1	-

*LTA denotes Library Technical Assistants, LC/A denotes Library Clerk or Aide.

**Figures on left indicate number of comments or pertain to LTA, figures on right pertain to LC/A.

***Figures in center indicate number of comments pertaining to both.

BIBLIOGRAPHY OF MANPOWER STUDIES AND REPORTS

School of Technology, SCC-A
Purdue University
Lafayette, Indiana 47907

Office of Manpower Studies
Director, Professor
J. P. Lisack

Manpower Report — Title

65-3 - Technician-Level Educational Planning for the Chemical Technology in Indiana, 20 Oct., 1965. Examines industries related to the Chemical technology. Presents scientists, engineers, and technicians as a percent of total employment in major industries. Explains methods of computing technician requirements by industry and locale. Includes occupational titles and sample chemical technology.

66-1 - Technician-Level Educational Planning in the Greater Lafayette, Indiana Area, Concerning the Electrical/Electronic Technology, January, 1966. Determines numbers of technicians needed annually in industries employing electrical/electronic type technicians. Examines ten year trends in local employment and projects requirements into future. Discusses occupations concerned, orientation of educational programs, curricula, and collateral items.

66-2 - Employment Trends in Five Indiana Counties, 1 Feb., 1966. Presents population and employment trend data for significant industries to facilitate technical education and facilities planning. Compares county and state data.

66-3 - Occupations, Qualifications, and Areas of Work in Architectural, Construction and Related Fields for Jobs Above the Skilled Craftsman Level, 10 March, 1966. Describes selected occupations to assist faculty concerned with determining requirements for and objectives of related educational programs. Occupational titles, definitions and qualifications are shown with required education, vocational preparation, and aptitudes.

66-4 - Foundry Technicians and the Foundry Industry in Indiana, 30 March, 1966. Examines the foundry industry, manpower requirements, and the kind of educational program needed - for foundry technicians. National manpower factors are corroborated in a survey of 125 Indiana foundries: survey respondents' opinions of educational needs (by subjects and courses) are included.

66-5 - Employment Trends and Technician Needs in Wayne County, Indiana, "The Richmond Study," 4 April, 1966. Determines kinds and numbers of technicians needed for preliminary educational program planning. Presents economic, manpower and employment trends data as well as listings by location and description of products of the more important industries. Describes methods used.

66-6 - Methods and Rationale for Determining Technician-Level Manpower Requirements by Locale - and for a Specific Industry, 20 July, 1966. A general review of sources of manpower data, ratios, factors, and methodology related to computation of estimates of technicians for industries or for a given locale.

66-7 - Selected Technical Education Needs in Howard County, Indiana, "The Kokomo Study," 1 August, 1966. Examines manpower, industry and economic factors to identify kinds and levels of post-high school technical educational programs that may be needed. Presents results of survey wherein the needs for these identified programs are verified. Describes methods and instruments used.

66-8 - Selected Manpower and Employment Data for Delaware County, Indiana and Six Contiguous Counties, 15 August, 1966. Compiled to assist in broad initial planning for establishing regional educational and training programs. State and regional population; employment, wage and industry data; and manpower factors are included.

66-9 - Region One Manpower Study. (N.W. Sector of Indiana) 18 October, 1966. This report is a projection - ten years into the future - for seven counties. It includes estimated changes in employment by industry and changes within occupational groups. Has special notes on needs for initial and continuing education, and on rising hiring standards.

66-10 - Manpower and Training Needs in Fluid Power, 30 November, 1966. Contains (1) Specific manpower requirements at five occupational levels in fluid power technology - with factors applicable to various major industry groups; (2) Types of educational courses needed; (3) The depth of understandings required at each occupational level in fluid power courses, and supporting technical and other courses; (4) Comments of representatives from Indiana industries. Includes methods and questionnaire used.

67-1 (Indianapolis); 67-3 (Calumet); and 67-4 (Fort Wayne) - Manpower Requirements for Industrial Illustrators and Draftsmen, (thru August, 1967). A series of reports for metropolitan areas indicated containing: (1) Background data re needs, employment, and salaries of technicians and draftsmen; (2) Occupational descriptions, qualifications, education and training; (3) Results of surveys to determine current and future needs and training program information; (4) Discussion of the impact of future technological changes on the drafting processes - and their effects on draftsmen qualifications. The hypothesis is made - and proven - that greater work complexity and advances in technology affecting the drafting processes, have made the utilization of Tracers less profitable; Job entry level is moving to the higher level of Detailer with better educational preparation.

67-2 (Indianapolis); 67-5 (Calumet); 67-6 (Fort Wayne); 68-1 (Kokomo) - Computer and Electronic Data Processing Manpower Requirements, (thru March, 1968). Reports results of research and surveys for metropolitan areas indicated concerning: (1) Background info re computers; (2) Job descriptions and qualifications of 23 computer and EDP occupations; (3) Numbers of people employed, current job vacancies and projected requirements; (4) types of equipments and nature of computer applied functions; (5) Training and educational programs; and (6) Ratios of computer jobs to total employment and job categories.

67-7 - Requirements for Personnel Staff Members and Supervisors, 28 December, 1967. Report contains factors - or ratios - of personnel staff members to total employees in each industry group. The past, present, and projected ratios and trends are developed for first-line supervisors (viz. foremen):

e.g. In 1952, there were 29 employees for each supervisor,
in the early 60's there were 20 employees per supervisor,
in 1967, there were 18 employees per supervisor, and
by 1972, there may be only 15 employees per supervisor.

The annual recurring losses, growth factors, and educational ramifications are described. Factors are applied to industries in the Northeast Region of Indiana.

68-2 - Indiana's Need for Assistants in Veterinary Medical Practice, 15 May, 1968. Study points out the needs for, identification of, description, education and control of auxiliaries to the professional veterinarian. Results of a survey of all practicing veterinarians in Indiana are presented. Report includes: (1) Titles, descriptions, duties and qualifications of animal technicians, small animal hospital attendants, livestock health attendants, and others; (2) The numbers of these auxilaries now employed, current job vacancies, and future requirements; (3) Salary and training matters; (4) The need for licensure or registration, and methods to be used; (5) Comments of veterinarians; and (6) Related Conclusions and Recommendations.

68-3 - Study of Computer Use in Medium-sized Manufacturing Firms, 1 August, 1968. This study examines the utilization of computers by medium-sized manufacturing concerns engaged in the fabrication of non-durable materials or light weight durable materials. Sampling techniques were used to acquire data from companies throughout the U.S. and a five-state midwest region by mail, plus a telephone interview with a special sample of midwest companies. The study includes: usage of EDP equipment, utilization by functional areas, estimated efficiency and dollar return on computer investment, manpower requirements and training and salary matters, major problem areas encountered and summaries of the survey findings. A review of pertinent literature is also reported in the study.

68-4 - A Proposed Land Surveyor Baccalaureate Program and the Need for Land Surveyors in Indiana, 15 September, 1968. The purpose of this study is to provide data and recommendations concerning land surveyors in Indiana. This report contains the types of surveying services performed, present employment, job vacancies, and the projected requirements for land surveyors. Data was acquired through questionnaires sent to all County Surveyors, the State Highway Commission and other government offices, to private practice surveying firms, and to selected firms in industry. The study establishes that substantial present and projected needs exist for land surveyors, and provides data and information useful for related curriculum development.

A proposed baccalaureate curriculum designed for professional land surveyors is included. Survey respondents indicated a favorable attitude towards the proposed program, gave some constructive suggestions, and indicated they were willing to hire graduates at reasonable salaries. The requirements for State registration of professional land surveyors are also discussed.

69-1 - Manpower Requirements for Pollution Control and Water Resources in Indiana and a Related Pollution Control Technology Curriculum, 24 Feb., 1969. Indiana is no different than most States in the need to cope with mounting problems in air and water pollution control, liquid and solid waste disposal, water resources and allied fields. At the core of many of these problems is the lack of engineers, professionals in physical and life sciences and technicians: this study identifies these occupations and presents current employment and job vacancies, and projected requirements. Manpower data is obtained through an extensive survey of manufacturing industries, water and wastewater plants, government and educational agencies. The hypothesis is made that a single curriculum of selected technical courses is common to a variety of related technician-level occupations. A proposed two-year associate degree program for pollution control technology and survey respondents' reactions to the curriculum, their willingness to hire graduates, and estimated salary information are included. Related matters of technician examination, certification or registration are discussed.

69-2 - Air Traffic Control and Flight Service Specialists in Indiana, 23 June, 1969. Describes duties and functions of these specialists, working conditions, and current and projected requirements. Discusses need for providing a sufficiently broad educational base to assure continuing job proficiency and professionalism, ability to apply latest technological developments, and to advance or move successfully into other related occupations. Provides recommendations for educational program development.

69-3 - The Case for Library Technical Assistants and Library Clerks in Indiana, 18 September, 1969. The purposes of this study were to identify the roles of these supportive personnel (as approved by the American Library Association), to determine their acceptance by practicing professional librarians, and to ascertain the present and projected needs in the school, public, college/university, and special libraries in Indiana. Study includes estimated monthly salaries, certification matters, courses needed in training programs, and related views of librarians. Data were obtained from extensive surveys: study was conducted under auspices of a professional library advisory committee.

NOTE: Copies of these reports are available for $1.50 per copy (Indiana Government and Educational Offices exempted). Please make check payable to Purdue University.